

**WE CLAIM AS OUR INVENTION:**

1. A method for matching a measured result from a examination subject with at least one dataset containing information from the examination subject, comprising the steps of:

arranging a plurality of landmarks on an examination subject in a geometrical arrangement;

obtaining a measured result from said examination subject, including said landmarks, and optically presenting said measured result as an optically presented measured result;

acquiring a dataset, including said landmarks, containing information from said examination subject;

analyzing the geometrical arrangement of the landmarks in said optically presented measured result and in said dataset using a first algorithm; and

allocating respectively corresponding landmarks in said optically presented measured result and said dataset to form a landmark pair using a second algorithm.

2. A method as claimed in claim 1 comprising using said first algorithm to calculate absolute spacings among said landmarks in the respective optically presented measured results and the respective individual datasets, and using the second algorithm to allocate corresponding landmarks in at least one optically presented measured result and at least one dataset using the absolute spacings calculated with said first algorithm.

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3. A method as claimed in claim 1 comprising using said first algorithm to calculate relative spacings among said landmarks in the respective optically presented measured results and the respective individual datasets, and using the second algorithm to allocate corresponding landmarks in at least one optically presented measured result and at least one dataset using the relative spacings calculated with said first algorithm.

4. A method as claimed in claim 1 comprising, in said second algorithm, permutating the allocation of the landmarks until a predetermined high coincidence is reached.

5. A method as claimed in claim 4 comprising, in said second algorithm, permutating the allocation of said landmarks until 90% of said landmarks are allocated.

6. A method as claimed in claim 1 comprising, in said second algorithm, recognizing and rejecting false landmarks.

7. A method as claimed in claim 1 comprising automatically defining at least one of said landmarks using data underlying the respective optically presented measured results and the respective datasets.

8. A method as claimed in claim 7 comprising physically attaching said markers to said examination subject, and automatically defining said at least one landmark automatically with a pattern recognition algorithm.

9. A method as claimed in claim 1 comprising conducting a two-dimensional matching of said at least one optically presented measured result and said at least one dataset, and comprising defining said landmarks according to the steps of:

defining at least three landmarks in an arbitrary sequence in said at least one optically presented measured result with reference to a said displayed image of said examination subject, with at least one of said landmarks being differently spaced from a remainder of said landmarks; and  
defining said at least three landmarks in an arbitrary sequence in each of said datasets with reference to said displayed image of said examination subject, with at least three of said landmarks in each dataset corresponding to two of said landmarks and said landmark that is differently spaced from the remainder of said landmarks.

10. A method as claimed in claim 1 comprising defining said geometrical arrangement of said landmarks using said first algorithm before defining said landmarks in said at least one dataset.

11. A method as claimed in claim 1 wherein the step of analyzing said landmarks with said first algorithm comprises analyzing all of said landmarks in common with said first algorithm only after all of said landmarks are defined in said at least one optically presented measured result and in said at least one dataset.

12. An apparatus for matching at least one optically presented measured result acquired with a medical apparatus from an examination subject with at least one dataset containing information from said examination subject, comprising:

a landmark definition unit for defining landmarks with respect to a displayed image of an examination subject in at least one optically presented measured result acquired with a medical apparatus from said examination subject and in at least one dataset containing information from said

examination subject for matching with said at least one optically presented measured result;

an analysis unit for analyzing a geometrical arrangement of said landmarks in said at least one optically presented measured result and said at least one dataset using a first algorithm; and

an allocation unit for allocating corresponding landmarks in said at least one optically presented measured result and said at least one dataset to form a landmark pair with a second algorithm after analyzing said geometrical arrangement of said landmarks with said first algorithm.

13. An apparatus as claimed in claim 12 wherein said definition unit defines at least one of said landmarks using data underlying said at least one optically presented measured result and said at least one dataset.

14. An apparatus as claimed in claim 13 comprising markers adapted for direct application to said examination subject and wherein said definition unit automatically identifies at least one of said markers, as at least one of said landmarks, using a pattern recognition algorithm.

15. An apparatus as claimed in claim 12 wherein said definition unit, said analysis unit and said allocation unit in combination form a computer with a picture screen and an input unit.

16. An apparatus as claimed in claim 15 wherein said input unit is a computer mouse.

17. An apparatus as claimed in claim 12 further comprising a memory, accessible at least by said definition unit, in which said at least one optically presented measured result and said at least one dataset are stored.

18. An apparatus as claimed in claim 17 wherein said memory also stores landmarks defined in said at least one optically presented measured result.

19. An apparatus as claimed in claim 17 wherein said memory also stores landmarks defined in said at least one dataset.

20. An apparatus as claimed in claim 17 wherein said memory also stores landmarks defined in said at least one optically presented measured result and said at least one dataset.

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